

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if the “protuberances” (lines 2 and 3) and “recesses” (line 3) are the same as those already set forth in independent claim 1, from which claim 5 depend.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins 5,678,332 in view of Pippins 6,502,336.

Hawkins discloses a grappling assembly for a machine having a boom, comprising:

- A dipper stick (10) pivotally connected to a boom (not shown)
- An implement (11) connected to the dipper stick (10)
- Means (17) for moving the implement (11) relative to the dipper stick (10)
- An arm (B) connected to the underside of the dipper stick (10) and movable between a grappling position and an inoperative position

- Means (F) operatively connecting the underside of the dipper stick (10) and the arm member (B) for pivoting the arm (B) relative to the dipper stick (10)
- Wherein in the inoperative position, the arm member (B) is disposed along an underside of the dipper stick (10)
- Means (34 and unnumbered recesses shown in A and B) for detachably latching the arm (B) in the inoperative position including at least one transversely disposed recess (unnumbered through which pin 34 extends) and a protuberance (34) insertable into the recess to maintain the arm member (B) in the inoperative position
- The means (F) for moving the arm (B) is receivable within the arm (B) between a pair of elongated, transversely spaced plate member (26b) when the arm (B) is inoperative
- The means (F) for pivoting the arm comprising a fluid actuated cylinder
- The arm's (B) plate members (26b) having a jagged edge (C).

However, Hawkins fails to disclose means including one of the dipper stick and the arm member having at least one transversely disposed recess and the other of the dipper stick and the arm member having a yieldably biased, transversely displaceable protuberance insertable in the recess when the recess is in alignment therewith, trippable upon pivoting the arm member into the inoperative position and insertable in the recess to detachably secure the arm member in the inoperative position, and upon pivoting the arm member out of the inoperative position to displace and detach the arm member from the inoperative position;

the protuberance has a curved outer surface and biased by a spring seated in the dipper stick;

the biasing force exerted on the protuberance is sufficient to yieldably bias the protuberance in the recess yet insufficient to retain the protuberance therein upon pivoting from the inoperative to the grappling position.

Pippins discloses a latching means (Figure 8) including a first member (200) having at least one transversely disposed recess (201) and a second member (202) having a yieldably biased, transversely displaced protuberance (203) insertable in the recess when the recess is in alignment therewith, trippable upon moving the second member (202) into an inoperative position and insertable in the recess (201) to detachably secure the second member (202) in the inoperative position, and upon moving the second member (202) out of the inoperative position to displace and detach the second member (202) from the inoperative position;

the protuberance (203) has a curved outer surface and biased by a spring (204) seated in the second member (202); and

the biasing force (by spring 204) exerted on the protuberance (203) is sufficient to yieldably bias the protuberance (203) in the recess (201) yet insufficient to retain the protuberance (203) when the second member (202) is pulled away from the first member (200).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the latching means of Pippins for the recess and pin connection of the grappling assembly of Hawkins in order to provide attachment and detachment without the need for tools and without having to deal with small parts which can be easily lost.

Regarding claims 5 and 12, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the dipper stick with the protuberances and the arm member with the recesses since it has been held that rearranging parts of an invention

involves only routine skill in the art. Additionally, as per the applicant's disclosure, these locations appear to be interchangeable with neither location providing any unexpected results, function or benefits.

Regarding claim 16, it can be seen that when Pippins latching means is applied to Hawkins grappling assembly the recess will be engageable with the protuberance in camming relation to cause the protuberance to displace and then be inserted into the recess when the arm member is angularly displaced to the inoperative position.

#### ***Response to Arguments***

4. In response to applicant's argument that the Pippins patent is nonanalogous art and therefore would be unknown to one of ordinary skill in the art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both the grappling assembly of Hawkins and the excavation tooth of Pippins are classified in class 37 Excavating and therefore lie in the same field of endeavor. It can be seen then, that both excavation teeth and grappling assemblies would be known to one having ordinary skill in the art. Additionally, the particular problem with which the applicant is concerned is the easily releasable connection between two mechanical parts of an excavator, of which both the Hawkins and Pippins references are reasonably pertinent.

5. In response to applicant's argument that Hawkins in combination with Pippins would not arrive at the invention, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the

claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Pippins is used solely for the releasable connection shown in Figure 8, this connection replaces the connection pin (30) in the Hawkins reference. Pippins discloses a benefit of the disclosed releasable connection over the connection of Hawkins, specifically to provide quick and easy removal of a part of an excavator without the use of additional tools. No instruction by Pippins is necessary to apply the connection the grappling assembly of Hawkins, as explained above, one of ordinary skill would know which modifications would be necessary to successfully incorporate the connection of Pippins with the Hawkins reference since both references lie in the same field of endeavor and the connection itself is a basic mechanical connection.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Torres whose telephone number is 571-272-6997. The examiner can normally be reached Monday through Friday from 7:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at 571-272-6998.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 571-272-3600. The fax number for this Group is 571-273-8300.

/Alicia M Torres/  
Primary Examiner, Art Unit 3671  
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